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ABSTRACT

Since research indicates teachers generally lack confidence in their ability to conduct lessons in the outdoors and feel inadequate regarding knowledge of the natural world, this guide has been developed to build teacher confidence in utilizing the outdoors. Designed to be used in conjunction with a practicum workshop, this guide presents techniques which can be demonstrated and practiced in a workshop situation. The following are addressed: philosophical background of outdoor education; educational assumptions (learning by doing, use of all senses, individual and unique ways of learning, learning by association, the importance of needing to learn, self discovery learning, group dynamics emphasis); the strand approach to environmental education (interdisciplinary learning incorporating variety/similarities, patterns, interaction/interdependence, continuity/change, and adaptation/evolution); sensory approach (use of all senses); planning field trips (pre-trip preparation, post-trip evaluation, check lists, etc.); activities (strand approach illustrated via activities for each of the five strands listed above, sensory approach activities, discovery approach activities, acclimatizing activities, and miscellaneous activities). Among the many activities listed are the following: empathizing with natural phenomena--role playing a tree; prickly-tickly (find something that prickles and something that tickles); the food chain game; a bug's eye view (how the world looks to a bug). (JC)

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A GUIDE FOR CONDUCTING OUTDOOR FIELD EXPERIENCES

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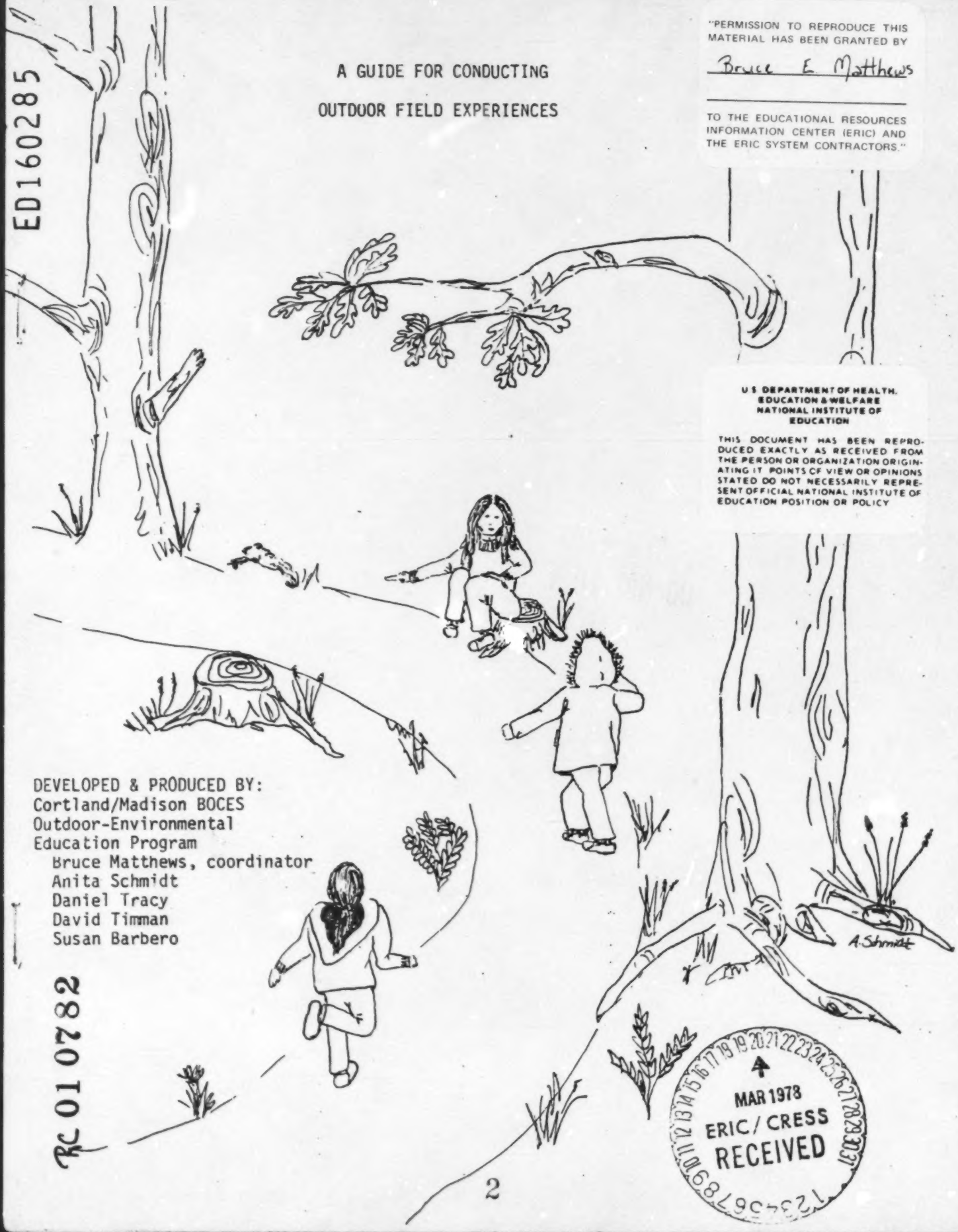

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INTRODUCTION

An outdoor education field experience has the potential for injecting the excitement of direct, hands-on learning in the real world into the curriculum of a school. The motivation on the part of students, which can be derived from the field experience, can rarely be duplicated in classroom situations alone. The obvious educational value of the outdoor field experience cannot be denied as the relevance of real-world learning unfolds. Why, then, do so few teachers take advantage of this year-round opportunity to utilize this outdoor learning laboratory? Why do so few classes go outdoors?

Research would seem to indicate that two of the major stumbling blocks for teachers in utilizing the outdoors as an educational resource are a lack of confidence in their ability to conduct these lessons, and a feeling of inadequacy regarding knowledge of the natural world.

In an effort to build teacher confidence in their ability to conduct outdoor classes this resource guide is being developed. It is designed to be used in conjunction with a practicum workshop, where the techniques discussed can be demonstrated and practiced. Helpful tips are found here, and planning is discussed at length.

It is hoped that this resource packet, and participation in a workshop illustrating these things, will greatly increase the teachers' confidence in their ability to conduct a class outdoors. As a result, more kids will be learning in a most effective manner, through outdoor education.

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PHILOSOPHICAL BACKGROUND

One of the most frequently voiced reasons teachers do not take kids outdoors is a feeling of inadequacy and a lack of knowledge about natural things. Unfortunately, this alone deprives many classes of some of the most exciting learning experiences possible.

It is important to realize that a vast knowledge of nature lore is by no means a prerequisite to using the outdoors with children. Many outdoor leaders started out with little knowledge, and acquired their skills through learning with children.

Most outdoor educators employ the discovery approach, wherein children are led to discover things for themselves. We feel that this is a most effective way of learning, and the discovery process can provide a great lead-in to problem solving approaches. In the discovery method, children are not told answers by the instructor, even if the instructor knows the answer. Rather, the answer to a childs inquiry about some natural thing tends to be " I don't know, let's figure it out." And by taking the children through a logical, step-by-step process the students not only discover the name (or make one up), but they discover things about it. The key is the instructor's willingness to say " I don't know."

Once a teacher will admit this to the class, a whole new approach can take place. Kids and teachers become an excited group of learners, ready to look at similarities, differences, patterns, interaction, interdependence, change, adaptation and evolution. This new approach, the strand method, can be utilized in any environment, and is as easily done by teachers with no outdoor backgrouhd as it would be for teachers of biological science. In fact, it is most effective with teachers willing to learn with kids, and who see themselves as humanistic in educational philosophy.

Therefore, a lack of knowledge about the outdoors need not be a deterrent to outdoor education. Given a teacher willing to admit a lack of knowledge (real or imagined), and willing to try a new approach, the outdoors could see a much greater use. The strand approach could provide this vehicle.

EDUCATIONAL ASSUMPTIONS

Outdoor education, like any other methodology, is based on assumptions about learning. If we hold these assumptions to be true, then we, as professional educators, owe it to our students to see to it that experiences meeting the criteria of these assumptions are provided to the best of our abilities. Outdoor education

is one methodology that enables us to meet the criteria of these assumptions. It is not intended to supplant regular classroom instruction, but rather to supplement this instruction with experiences which enable these assumptions to be best met.

ASSUMPTIONS:

1. The learner learns best through active involvement in experience, by learning by doing.
2. The use of all senses, and the promotion of sensory awareness, enables a better learning experience to take place.
3. Individuals have individual ways of learning, and the best experience allows for unique ways of learning.
4. Learning is done by associating the new learning with something previously known.
5. The desire or need to learn must exist before learning can take place.
6. The learner learns best when allowed to discover for himself, and this learning is enhanced through the excitement generated by the discovery.
7. Group dynamics can function with a positive or negative influence on learning; therefore the positive impacts of group dynamics should be emphasized.

The criteria in these assumptions point toward a method of learning utilizing the real world, recognizing the value of discovery and using the senses without channeling into regimented subject areas. The strand approach to environmental education meets these criteria.

STRAND APPROACH TO ENVIRONMENTAL ED.

Environmental education has as its major goal the learning about and experiencing of all types of environments, from personal, mental surroundings to the world as a whole. Through understanding these environments the learner can develop a better understanding and awareness of himself, his relationships with others and his dependence on the natural world. The best approach to environmental education would be one that is multidisciplinary, allowing for the freedom of discovery through the use of all the senses.

The strand approach is one such method. The strand approach provides a continuity of learning that cuts across subject boundaries and artificial compartments of learning. The real world is not compartmentalized, and the relevance of learning in the real world should not be divided for the sake of convenience. The strand approach encourages using discovery techniques and sensory methods in experiencing outdoor environments. It is a "natural" method of learning, based on the theory that it is through these strands that a child first learns, and continues to learn as he develops.

The strand approach deals more with how the learner learns than with what he learns. The learner is put into an environment full of stimuli, and guided in seeing patterns, relationships, etc. It allows for developing a feeling for and about the outdoors while also learning about it. It combines a scientific approach with affective experiencing, investigation with problem solving.

The strands themselves may at first seem difficult to understand; and they do require a bit of effort in reorganizing thinking along strand lines. Depending on the level of explanation, strands can seem outrageously complex or relatively simple.

There are five overall strands which constitute a total approach to environmental education. These are: variety/similarities, patterns, interaction/ interdependence, continuity/change, and adaptation/ evolution.

Variety/similarities deals with the way things are different or alike. It involves a recognition of things, and coming to know them at first through classifying according to their differences and similarities. Things are different , yet alike; alike and yet different. It is a method of sorting out stimuli into recognizable forms.

A further refinement is soon needed in order to aid in classifying things for personal use. Patterns of arrangement or organization begin to emerge, an order is established. These patterns can be observed or created.

They are found in spatial patterns or physical arrangements; functional patterns dealing with how things do what they do; and organizational patterns dealing with the arrangement of things in functioning with one another.

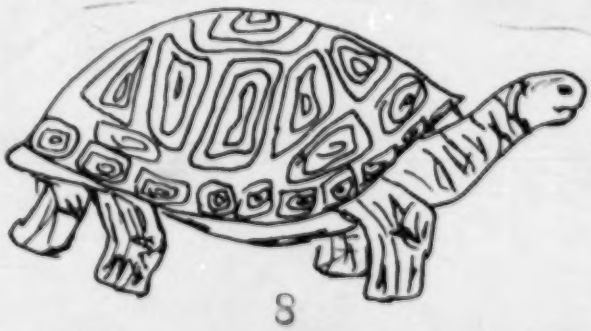
Interaction/interdependence begins to emerge as a strand when the learner focuses on relationships between things. Interaction occurs when two or more things affect each other by their existence or actions. Interdependence occurs when two or more things depend on each other. These relationships are most important understandings, for as the child develops an awareness of them, he becomes aware of his affects on himself, his fellow beings and the natural environment, and his dependence on these things. At the intermediate grade level this is a key strand.

Continuity/change has potential for years of semantic debate. However, two key phrases can be used to establish a relationship between two seemingly opposite concepts. Everything continues to change, and all ways of change are connected in a continuous flow. Change deals with process, continuity concentrates on connection. Change is concerned with the process of birth and death, and the non-static nature of things. Continuity is concerned with connections in time and space, what things were, and what they will be: for example, the weather, and growth.

The fifth and final strand is adaptation/evolution. Adaptation is change to meet changing conditions, fitting into circumstances and situations. Evolution is long term changes as a result of adaptation, which cannot be reversed. Adaptation/evolution are the first four strands carried to the logical conclusion.

Obviously, each strand builds upon the other. Young students will only be able to handle the first strands, while older students, who are able to think in more abstract forms, will be able to handle the later, more complex strands. The first concepts deal with classifying things and gradually deal with more complex relationships, from the concrete to the abstract.

All things change. Natural communities will usually change in a gradual, orderly manner. Man has many affects on these processes. Through utilizing the strand approach to environmental education, children can hopefully increase their understanding of these affects, thereby insuring a more enlightened world and a better environment.



DISCOVERY APPROACH

Rachel Carson in her book A Sense of Wonder stated, " a childs world is fresh and new and beautiful, full of wonder and excitement." The world that lies outside the four walls of the classroom is vast and full of wonders to be discovered. By taking the students out of the classroom and joining them in exploring and discovering the natural world, learning becomes exciting and the child becomes motivated to learn and discover more.

Miss Carson further stated, "to keep alive a child's inborn sense of wonder, he needs the companionship of at least one adult who can share it, rediscovering with him the joy, excitement and mystery of the world we live in." All too often the student is not encouraged to discover the world that surrounds him. A major reason for this is that many teachers do not feel knowledgable enough about the outdoors to take a class outside. However, the teacher need not know succession step-by-step from pond to forest. This is a learning time, and a time of discovery which the teacher can share with the student. There is nothing wrong with a teacher saying "I don't know, lets find out together." A main objective with taking a class outdoors is not to label and identify every tree one sees according to taxonomical nomenclatures, but to pave the way for the child's discovery. To arouse his sense of discovery is more important than filling him with facts, for an interested, and motivated child will discover the name on his own. Better yet, he can make up one based on what he discovers about it. Affective awareness and understanding will lead to enlightened knowledge not only about nature, but its proper use. The teacher can still look around and experience the wonders of the world with the student, stimulating and motivating him into discovery.

The discovery approach to learning as related to field experience is one that allows the students to leave the environment of the classroom and enter the outside world. It is an approach that gives the student a "hands-on" experience where the child can hold the bug, smell the flower, taste the roots and so on. It is an approach that allows the student freedom to let his curosity go, and with the aid of a helping teacher, discover the world.

This approach is one that has tremendous carry-over value from childhood to adulthood. It is not just a way to get the students out of the class to let them run wild and pass the time away. Rachel Carson wrote finally," the lasting pleasures of contact with the natural world are not reserved for scientists but are available to anyone who will place himself under the influence of earth, sea sky and their amazing life."

SENSORY APPROACH

Personal and environmental awareness is a key concern in the world today. Utilization of the outdoors as a learning environment both develops environmental awareness and uses that awareness to promote further environmental understanding. The outdoor environment becomes the classroom where the student learns through discovery, developing awareness about himself and his role in the natural world.

The use of the senses is the key to awareness and discovery. In fully utilizing all the senses, discovery in the out-of-doors is an exciting way to learn. The senses have the power to open up a whole new world if they are tuned in to nature, expanded, utilized to their fullest potential.

The sensory awareness approach to environmental education allows the students to discover and learn by using their senses. The sensory approach also allows for a greater degree of affective learning to take place. According to Steve Van Matre, sensory awareness activities are " designed to heighten one's sense of a personal relationship with all life. These activities provide a first hand, often empathetic contact with the natural world." A tree is experienced by taste, touch, smell, sound and sight instead of through information and facts. By using all the senses the student can learn and remember more about the tree because he discovered the information himself, and can also develop an awareness of the tree as an entity, a living thing.

The sensory approach to environmental education allows individuals to "develop awareness and an appreciation of life's natural systems." According to Steve Van Matre, "the most pressing environmental issue of our times is the need to help people reawaken their innate sensitivity towards life." Through sensory awareness in environmental education this resensitization to nature can occur.

FACTORS IN PLANNING FIELD TRIPS

Field trips and experiences are a means of extending the school classroom curriculum to the outdoors to utilize the outdoors to its fullest by giving students first hand experiences in our natural environment. The trips can be a learning experience for both teacher and student where the barriers separating both may be broken down with the simple discovery of a spider spinning a web.

Three areas where teachers should be concerned when thinking of going on a field trip are;1. the pre-trip preparation for both student and teacher; 2. The trip itself; 3. The post-trip followup and evaluation.

PRE-TRIP PREPARATION

1. Decide what type of trip is to be taken. Determine the purpose of the trip, setting up goals and objectives to be learned.

2. Visit the site where the trip will be and survey the area. Take note of what there is, noting things to observe and things to avoid. Think of questions that might be asked the students and questions they might ask. Do not feel that you need to know all the answers to all the questions. This is where the discovery approach enters. Think of activities or games that could be done on the trip. Don't neglect the value of the time on the road.

3. Make necessary transportation arrangement, including departure, arrival, eating accomodations,rest rooms, etc.

4. Secure parental permission if necessary and contact the principal and other teachers to explain the trip details. Also, if the trip is on private land get owners permission.

5. Prepare a pre-trip lesson for students

   a. Explain the purpose of the trip to the students. Discuss the objectives, and ask pre-trip questions to get students thinking about the trip.

   b. Go over what clothing should be worn for that day, taking into account weather conditions, field conditions etc.

   c. Discuss proper conduct during the trip.

   d. Wherever possible have the students help plan the trip. Possibly assign each student a given task to be responsible for-ie. recording, observing, drawing, collecting etc.

THE TRIP

1. Initially it is good to restate the purpose of the trip and the way the students are expected to act.

2. In leading the group try to keep them together and not spread out. It is often a problem that the only ones that learn are those in the front half of the group. When coming to a point to be discussed position the group in such a manner that all can see and hear.

3. While certain goals may have been made up previously it is important to remain flexible in what is taught. Leave room for the unexpected. It is not always as important to learn the name of each species of tree as it is to know their values to our environment.

4. Don't be afraid to say"I don't know". Make this a shared learning experience.

5. Don't stand around too long in one place and lecture. The students interest may be lost. Let them use their senses to become aware of the surroundings.

6. Don't get carried away and try to cover too much material.

7. Let the student explore and ask questions freely.

8. The collecting of specimens is alright providing a minimal amount is taken and permission has been granted by those who own the land. Anything protected should not be taken.

POST TRIP SUMMATION AND EVALUATION

1. Discuss with the class the trip. What was seen? Talked about? heard? etc.

2. Encourage them to research their questions and join them on questions you might have.

3. Talk about personal observations of feelings.

4. Make displays or bullentin boards concerning the trip.

5. Analyze specimens.

6. Discuss trip to see if improvements can be made for future trips.

CHECKLIST OF PREPARATIONS

1. Determine purpose
2. Administrative approval
3. Know liability as teacher in charge
4. Notify other teachers concerned
5. Pre-trip site
6. Obtain permission from private land owner
7. Secure transportaion
8. Parental permission
9. Food arrangements
10. Pre- trip class discussion
11. Define rules of behavior
12. Have first-aid kit
13. Prepare follow-up

ON TRIP

1. Give orientation to area and what will be done
2. Arrive on time;leave on time
3. Allow time for discovery
4. Follow common courtest rules
5. Lead pleasantly but firmly
6. Keep group assembled
7. Use visual signs
8. When talking to group organize so all can hear
9. Don't talk too much
10. Use sensory experience techniques
11. Emphasize basic concepts
12. Stimulate powers of observation
13. End of trip follow-up site

FOLLOW UP AND EVALUATION

1. Write reports
2. Make notebook
3. Write thank you letters
4. Creative writings
5. Make oral reports
6. Read supplementary materials
7. Make exhibits
8. Arrange bulletin board displays
9. Clean equipment
10. Build upon field experiences
11. Encourage further - research
12. How did we do?
13. What did we learn?
14. What might we do differently next time?
15. What did we like or not like about the trip?

Activities

This activities section is broken into four headings: The Strand approach illustrated; discovery activities; sensory awareness/acclimatization; and miscellaneous games. All of these activities can be used during and as part of an outdoor field experience. Many have been used by the instructors associated with the Cortland BOCES Outdoor Education Program, and are highly recommended. Not all of these will work with you and your class, and some may need to be adapted. Likewise, your activities should not be limited to these ideas alone.

Strand Approach Illustrated

Describing the Strand Approach in abstract terms is often difficult, and often equally difficult to understand. Yet it is a method which is relatively simple to use, once understood; and it provides a unique means by which teachers and children can explore the outdoors without having a great deal of natural history background. This section will take the strand approach step by step, strand by strand, in an attempt to illustrate how this approach can be implemented.

The first step in using the Strand approach as a leader involves gearing up to ask questions constantly, answering questions with questions, and promoting a problem-solving attitude with the students. This approach depends on students finding things out for themselves, guided by a leader, and not being spoon-fed information.

Strand I. Variety/similarities (Appearance)

A. Whole thing
   1. How does this tree look like that one?
   2. How does it look different?
   3. Describe how it looks.
   4. Investigate the tree, using all senses.
   5. Make up a word that best describe the tree.

B. Look at parts of one thing
   1. How does one part (trunk) look like another (leaf)?
   2. How does it look different?
   3. Describe, etc.

C. Play 20 questions on natural things.

Strand II. Patterns (function, arrangement)

A. What does it do?

B. Describe the patterns in an object's appearance.

C. Look at:
   1. Spatial arrangement (bark patterns, tree shape)
   2. Function (how, what things do)

D. Pick out observable patterns
   1. Visual (clouds)
   2. Audio (music)
   3. Taste (associations)
   4. Touch (textures)
   5. Smell (associations)

E. Pick out texture patterns that suggest feelings:
   1. Happy
   2. Sad
   3. Love
   4. Sweet
   5. Sour
   6. Jealousy
   7. Friendly
   8. Ugly
   9. Pretty
   10. Scarey
   11. Etc. etc.

F. Pick out different shapes in natural objects:
   1. Circle
   2. Square
   3. Triangle
   4. Spiral
   5. Radial
   6. Etc.

Strand II. Patterns (cont.)

G. Find things that look one way at one point, but change appearance as viewpoint changes.
   1. Long or wide cross sections of things
   2. Time changes (flowers die, leaves sprout, etc.)

Strand III. Interaction/interdependence (relationships)

A. Relationships within (function, dependence)
   1. How is one part related to/dependent on another?
      a. How are roots related to leaves?
   2. What are the functions of parts that make up a whole?
      a. Discuss the parts, and their contributions to whole.
      b. What would happen if we removed this part?

B. Relationships between
   1. How does this organism affect that one?
   2. How is this related to that?
   3. How is this dependent on that?
   4. What is the affect of this organism/action on...?

C. Begin to build a system of relationships.
   1. Food
   2. Energy
   3. Shelter
   4. Water
   5. Nutrients

D. Play the web of life game.

E. Develop interrelationships chain, starting with one organism.

Strand IV. Continuity and change

A. How is this changing?

B. How is it remaining the same?

C. Remember: Continuity suggests connection.

D. What changes will be seen today?

E. What change is happening today that won't be seen?

F. How is what is today a change from yesterday?

G. Draw a chart, beginning with an item, and show the different ways it can be changed. Connect the changes with lines.

Strand V. Adaptation/evolution

A. Look at changes which are occurring. Why are they happening? What is the cause or causes?

B. What conditions cause or might cause adaptation?

C. When change is irreversible, evolution is said to have occurred. Look at things, identify how things might have evolved, and try to determine causes.

D. How do animals adapt, or fit into, conditions like
1. Cold
2. Warmth
3. Rain
4. Water
5. Flying

E. Look around. Find things that have adapted for: (Plants and animals)
1. Climate
2. Living in water
3. Living in trees
4. Living near man

F. Make up an animal that is ideally suited for living in various ecosystems in the area.

1. Forest
2. Farms
3. Old fields
4. Lakes
5. Streams
6. Village Parks
7. Rooftops, etc.

(Draw the animal)

DISCOVERY APPROACH

Below are listed and outlined some activities which can be used to enhance the Discovery Approach. These activities tend to key the student's on exploring and finding things on their own. They can be used in conjunction with other activities or as an end in themselves.

A. Curio Collector

1. Leader calls name of something to be found (exp.: Hollow log).
2. Players scatter to find object.
3. First to find it calls out.
4. Group examines and discusses object.

B. Nature Near and Far

1. List 20-30 items to be found on trail.
2. Give score to each item (birdnest, 10 pt.; butterfly, 5 pt.; etc.)
3. First player to observe it and report it to leader scores.

C. Scavenger Hunt

1. Divide children into groups.
2. Each group has a list of items to find.
3. First team back with correct and complete list wins.
4. Include kinds of leaves, rocks, etc.
5. Omit items you do not want picked.

Variation 1: Teams bring in items with names beginning with each letter of the alphabet.

Variation 2: Leaf scavenger hunt: 10 names of trees.

D. Doubt It!

1. Players sit in circle.
2. Person starting says, "I can see a ... (white oak)."
3. Second player repeats it and adds an additional item.
4. Doubters may challenge by saying, "I doubt it."
5. If person challenged is correct, doubter is out of game; If doubter is correct, person challenged is out.
6. If person cannot repeat saying correctly, then he/she is out.

Variation: Instead of being out must perform some stunt: stand on head, sing song, etc.

E. Tree Tag

1. Divide into equal teams.
2. Give each team a different name of a tree (exp. Oak, Elm).
3. Leader calls out "Oak".
4. All Oak players must run toward any Oak tree.
5. Elm team runs after Oak team and tries to catch them.
6. If Oak player is tagged, then becomes an Elm.
7. Team that ends with most players wins.
8. Can move to another section of woods and be given different names of teams.
9. If player tags wrong tree, must go to other side.

G. Observation

1. Walk single file.
2. Leader asks first person "What is this?" (loud enough for all to hear) pointing to something; exp. an oak tree.
3. Goes down line until gets right answer.
4. Persons who are wrong go to end of line.
5. Object is to stay at head of line.

H. Recall

1. Place 8-20 nature objects on the ground.
2. Cover with cloth.
3. At signal pull cloth away.
4. After 10-15 seconds cover objects with cloth.
5. Object is for players to write down as many objects as he can remember.
6. Need paper and pencils for as many participants.

I. Name This Tree

1. Break group down into two teams (or more).
2. Each team has a card and pencil and are given different trees.
3. Teams have to make as many types of observations and record them in writing in a given time (10-15 minutes).
4. When groups meet, ask students to read their descriptions.
5. Can other teams identify the tree.

Variation: Use other plants (burdock, milkweed, etc.)
Use birds or animals.

SENSORY APPROACH

These activities are designed to enhance environmental awareness through an expanded use of all the senses. Not all activities use all the senses, but there are plenty of good ones that concentrate on single and multi-sensory exploration. Most activities use sensory perception as a means of gaining a wider experiencing of natural surroundings. One term for this is "Acclimatizing", and there are some acclimatizing activities included.

A. Indian Hike

1. Go in single file v-e-r-y carefully. Try not to make a sound.
2. Don't talk above a whisper.
3. Stop frequently to <u>listen</u> as well as look.
4. Listen for wind, song of bird, rustle of small animal, etc.
5. Look for <u>sources</u> of sounds.

Variation: To concentrate only on sounds. May blindfold participants.

B. Sense of Touch

1. Collect objects that have distinct texture differences. (Feather, bark, clay, pebbles, etc.)
2. Blindfold group and have them guess what the objects are.

Variation: Use objects with distinct scents (apple, soap, ditto paper, etc.).

C. Mimicry

1. Being a blade of grass (use sense of sight, touch, and sound).
2. Children become blades of grass (sway with wind, feel warmth of sun, in a rainstorm, grass that is old and slowly drying in the sun).

Variation 1: Blindfolded
Variation 2: For verbal expression: which did he/she enjoy most and least and why.
Variation 3: Use different objects: stream, logs, etc. and ask child to mimic a specific or several characteristics of object.

D. Bug's - Eye View

1. Stretch out on grass level.
2. See what world looks like to a bug.

Variation: Any animal views such as a mouse.
1. Does the tall grass interfere with vision
2. How does it feel to "scurry" like a mouse.
3. What sources of food was found.
4. What animals and sounds were frightening to a mouse.

E. Camera Game

1. Ask each child to form a box with thumbs and forefingers.
2. Ask the child to look through his/her "boxcamara", and find a picture in it of the wetland and what is most interesting to him.
3. What different lights and shadows were seen.
4. What different shapes were found.
5. What different colors were found.
6. What different sizes were found.

ACCLIMATIZING ACTIVITIES

SEEING -- CHANNEL OTHER SENSES THROUGH YOUR EYES

Look up.

How would you describe the sky? Work at being precise in your visual account.

The sky is not blue. It may be robin's egg, hyacinth, azure, or steel just for openers. There are an estimated seven million colors!

Feel the sky.

After pinning down its color, what about its texture, or smell, or taste? Is it heavy, smoky, or murky? How does it make YOU feel?

Look at something nearby.

Ask yourself: what was it like yesterday? What will happen to it tomorrow? Why is it called what it is? If it could speak, what would it say? How does it look from a different angle? How does it smell?

FOCUSING -- CONCENTRATE ON GATHERING MANY CLEAR IMAGES

Close one eye and focus on the tip of your nose. Open your eye and shift your vision to something about two feet in front of you, now click your eyes into focus on an object four feet away -- now thirty feet away -- then one hundred feet -- two hundred -- finally, focus on the far horizon. Run through this same sequence two or three times. Note the feeling in your eyes.

Your eyes are superb binoculars. If you use them consciously, you can add visual layers to a scene. You can gain dimensions in feeling as well as seeing.

Let your eyes wander over the landscape.

Try to keep them moving at first. Sweep back and forth over the entire scene without stopping. Take your time. Now, pause on the USUAL. Focus on objects at various distances and angles. Look away, then return to focus again.

Search for designs in what you see.

Look for circles or spirals or cylinders or cones. Center your attention on an arrangement that is repeated. NOTE SPACING. Expand your focus to look for the distribution of like objects.

EMPATHIZING -- ROLE-PLAY NATURAL QUALITIES

Observe a tree.

Try to feel its "woodiness", or its "greenness", or its "tallness", just by looking at it. Get inside its substance.

We identify with something by sharing experiences. We feel "at home with" something by sharing surroundings.

Put your arms around your tree.

Hug it. Clasp it to your body. Smell its skin. Trace the patterns in its bark with your fingertips.

We role-play to gain contact with inner and outer feelings. How the object feels gives depth to how you feel.

Watch an animal.

Enter into its feelings in the same way. What does it see? How does the sun feel on its back? Become this animal's friend -- waiting on him to come and play. Tag along with him.

YOU ARE WHAT YOU FEEL. One way to get outside yourself is to get INSIDE something else. By giving your whole self to the experience, it will fill your world.

PRICKLY - TICKLY

Divide up into groups of three. Have each person find something with prickles and find something that tickles. (Everyone should keep his discoveries secret until it is time for "sending"). The "receiving" member sits with his hands in his lap, palms up and head tilted back, eyes closed. The other two silently and slowly share their objects by patting them lightly in his palm, brushing them along his cheek and rubbing them under his chin several times. Switch roles so everyone gets to be a receiver.

SHARING CIRCLE

At the end of a Quiet Walk form a sharing circle. Stand in a circle, holding hands; sit down, go around the circle having each person verbalize his feelings, observations, or sensory experiences. It gives everybody a chance to tell about the "neatest thing that happened", and it makes a nice summary of the Quiet Walk.

ANT'S EYE VIEW

This is done with one person at a time. Lie down, face up, in tall grass or clumps of moss -- anywhere that the ground vegetation can surround your head. Shut your eyes and feel along the ground with your fingers, like an ant walking across the forest floor; walk with your hands. Stretch out your arms. Pretend they are the antennae of the ant (keep fingers and thumb together). Explore and probe around your habitat with your new "eyes". Now open your eyes and look up at the people standing around you looking down on YOU. Turn your head to the side and peer out through the vegetation right at ground level; shut your topmost eye and just look with the ground level one. Now find a real ant and follow him for a while.

LISTENING POSTS

Ask each person to find a special "listening" tree nearby. By putting their ear up to the tree they can focus on all the sounds of the forest. After a couple minutes of listening, have the them share the sounds they picked up. Then ask everyone to sit down next to their listening post and write down what they hear, but only as "letters" describing each of the sounds. No names, just letters strung together. On a sheet of paper have them show their listening post with these sound waves coming in from different directions.

IMAGES

Sit in a circle and pass around some natural object. As each person receives the leaf, shell, pine come, or whatever to examine; he must describe it. But each in turn must describe it differently from the way anyone else did. Some might look at it from different angles; some might talk about its color, or its shape, its smell, its taste, its texture, or its sound. Some might even describe its feelings or its place. (You may want to call out "pass" every couple of minutes to regulate the pace.) When all have finished with the object say: "Lets return it very carefully to its natural spot. If you ever walk by here again, you'll probably recognize it it and feel as if you know it.

AMBULATORS -- These are exercises to do while walking:

Passing it back - pick up something that is interesting and pass it to the person behind you. He passes it on, and so forth to the end.

Walking backwards - especially effective where there is a natural "hallway" such as a deer run. Just turn around and walk for a while facing where you've been instead of where you're going. It slows down the pace and changes the vantage point.

Going barefoot - don't overlook the obvious sensory advantages of taking off your shoes and socks. You can pause along the way and try to pick up different objects with your toes.

AMBULATORS (cont.)

Looking for a color - when there's going to be a fairly long walk between techniques, ask everyone to watch for a specific color (pick a color, any color!) and to point out things that are that color. This can also be done with PATTERNS, or ASSOCIATIONS (spirals, something helping something else, etc.)

Movie camera - the wide angle lens of the movie camera technique can also be used as you are moving along a trail.

Animal tracks - say, "From here to there (specify there), we'll all walk like different animals". Each person chooses what animal he wants to be -- an animal that might live in the area. Then each person walks like his animal, thinking about the kind of tracks that animal would make.

MISCELLANEOUS ACTIVITIES

A. Leaf Prints

1. Equipment needed.
   a. Crayon
   b. Paper
2. Find hard surface (flat rock).
3. Place leaf on surface with veined side up.
4. Cover leaf with paper and using crayon, rub crossways of leaf on paper.
5. Can be mounted or kept in notebook.
6. Good way to learn shapes of leaves and names of trees.

B. Plaster Casting of Animal Tracks

1. Materials.
   a. Plaster of paris
   b. Water
   c. Cardboard, plastic or metal collars about 2" high with diameter large enough to enclose track
   d. Small brush (optional)
2. Locate firm, clear track (along banks of streams and ponds, near food sources)
3. May want to rake an area clean.
4. May want to bait area using fish, coon or apples in middle of raked area.
5. Clean tracks of any leaves, twigs or loose dirt (small brush).
6. Place collar around track and press into soil.
7. Mix plaster with water to consistancy of thick, heavy cream.
8. Mix enough for 1" layer when poured into track.
9. If you wish to hang cast, place a loop of wire in plaster to act as hanger.
10. When dry take cast up, remove collar and wash away any dirt or sand that clings to cast.
11. Can make a collection of plaster casts, good way for children to learn different animal tracks.

C. Mushroom Spore Print

1. Materials
   a. Colored paper
   b. Mushrooms
   c. Jar
   d. Rubber cement
2. Find a full grown mushroom.
3. Cut off stem.
4. Place cap gills down on a piece of paper. (You may have to experiment since you may not be sure of the color of the spores. First try may be done on a ½ black, ½ white sheet to determine which spores are better displayed.)
5. Cover with a glass or bowl to keep mushroom moist.
6. To make print more permanent, first spread paper with a thin layer of rubber cement.
7. Can be used as decorative object or as a study spore print to learn more about mushrooms. The color of the spores are an important distinguishing characteristics of mushrooms.
8. Make sure children wash hands thoroughly after handling mushrooms as a prevention method.

D. Nature Guggenheim

1. Materials.
   a. Sheet of paper for each player
   b. Pencil for each person
2. Choose an appropriate word for the nature theme you wish to cover and write it vertically on paper.
3. Write nature categories across top.
4. Object is to fill in all categories with words beginning with letter for that word.

	Animals	Flowers	Trees	Birds
N				
A				
T				
U				
R				
E				

5. Can be a timed game or an activity for the bus trip back.

E. Snake-In-The-Grass

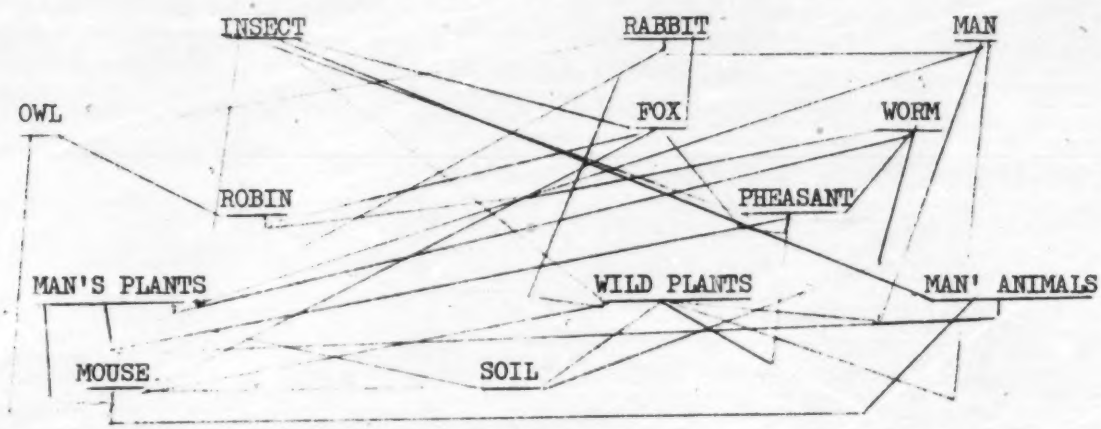
1. Starter snake lays down on his stomach.
2. Everybody else gathers fearlessly around to touch him.
3. When referee shouts, "Snake-in-the-grass," everybody runs, staying within bounds of snake area.
4. Those tagged become snakes, too.
5. Last person caught is starter snake in next game.
6. Not really a learning game. May be used as an ending activity, getting close to nature.

THE FOOD-CHAIN GAME -- THE WEB OF LIFE

Purpose: To demonstrate the interdependencies that exist among all living things -- including man: that all life depends upon soil, air, and sunlight; that predation is a way of life for many animals; that man may affect other forms of life by his management or mismanagement of soil, plant life and animal life.

Equipment needed: A ball of string and a pair of shears. Several signs with strings attached so that they may be worn around the neck. On these signs, letter or draw the following characters:

1. Soil
2. Man's Plants
3. Wild Plants
4. Man's Animals
5. Worm
6. Mouse
7. Robin
8. Rabbit
9. Pheasant
10. Owl
11. Fox
12. Insect
13. Man



How to do it: Tell the children that today they are going to play a game which will show them how plants and animals depend upon each other and how all living things depend upon soil, water, air, and sunlight. Let a glass of water and a deep breath represent the "air" and "water" requirements for life. The ceiling lights or a flashlight will represent the sun. The game may be simple or elaborate.

Starting with "soil and continuing through "man", the children are brought into position one at a time as illustrated. After each enters the game, the strings are stretched between the new individual and his food-chain partners. Encourage the children to tell where the strings have been run, ask students if it looks like a spider web; that is why we call this the "web of life." Have "man" drop his strings. What creatures are affected by man's disappearance? Repeat this, having "mouse" drop his strings. Are any other animals affected? Finally, what happens when "soil" disappears?

This is visual education and may be very effective in expressing several concepts.

TEACHER TIPS

1. Proper clothing and dress are important. Cold and wet children are uncomfortable and unattentive.

2. Group considerations:
   a. If participants are easily frightened, insecure, or unaccustomed to environmental stimuli being used, you may not want to use blindfolds for sensory awareness - use the senses they rely on most (sight or sound) and then move to single sensory activities.
   b. For hyperactive groups try to use senses of which students are less aware of and require more concentration (touch, smell, taste).

3. Activities can be altered and adapted to fit any of the special needs of the group. Feel free to be creative!

4. Flexibility and spontaneity are important. Teacher should tune into "teachable moments" and be prepared to follow group interests and/or flexible lesson plan.

5. Teacher should also be an active participant. This allows for greater creativity and spontaneity. Include child through encouragement and give him the opportunity for personal verbalization.

6. Teacher should be sure the children have an understanding of the special nature of the activities so he/she won't be inhibited.

7. When teaching activities that involve investigating living plants, remember to bring child down to plants level rather than picking the plant and destroying it.

8. Be prepared - if you need props or materials be sure they are on hand.

9. Involve each child in activity.

10. Use buddy system or small group team approach to help keep track of the children. For large groups color coding may be used.

11. When picking plants be sure not to pick poisonous or protected plants.

CREDITS

This packet has been the result of much research, evolution of technique, and experience. It is the product of many people; and each volunteer and instructor who has worked with the Cortland BOCES Outdoor-Environmental Education Program has contributed. A listing of a few resources and people who are responsible for major ideas in the evolution of this packet are:

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